



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

Refer to:
2002/00890

July 24, 2003

Mr. Bob Graham
State Conservationist
Natural Resources Conservation Service
101 SW Main Street, Suite 1300
Portland, OR 97204-3221

Re: Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation on the Sinko Property Wetland Restoration Project, Coquille River, Coos County, Oregon

Dear Mr. Graham:

Enclosed is a biological opinion (Opinion) prepared by NOAA's National Marine Fisheries Service (NOAA Fisheries) pursuant to section 7 of the Endangered Species Act (ESA) for the Sinko Property Wetland Restoration, Coos County, Oregon. NOAA Fisheries concludes in this Opinion that the proposed action is not likely to jeopardize Oregon Coast (OC) coho salmon (*Oncorhynchus kisutch*). Pursuant to section 7 of the ESA, NOAA Fisheries has included reasonable and prudent measures with non-discretionary terms and conditions that NOAA Fisheries believes are necessary and appropriate to minimize the potential for incidental take associated with this project.

This document also serves as consultation on essential fish habitat pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and its implementing regulations (50 CFR Part 600). NOAA Fisheries concluded that the proposed action may adversely affect designated EFH for Pacific salmon. As required by section 305(b)(4)(A) of the MSA, included are conservation recommendations that NOAA Fisheries believes will avoid, minimize, mitigate, or otherwise offset adverse effects on EFH resulting from the proposed action. As described in the enclosed consultation, 305(b)(4)(B) of the MSA requires that a Federal action agency must provide a detailed response in writing within 30 days after receiving an EFH conservation recommendation.



Questions regarding this letter should be directed to Chuck Wheeler of my staff in the Oregon Habitat Branch at 541.957.3379.

Sincerely,

for Michael R Crouse

D. Robert Lohn
Regional Administrator

cc: Russell R. Hatz, NRCS, Portland, OR
Deborah Virgorvic, NRCS, Portland, OR
Tom Purvis, NRCS, Coquille, OR
Scott Zimmerman, NRCS, Roseburg, OR
Randy Van Hoy, Ducks Unlimited, McMinnville, OR

Endangered Species Act - Section 7 Consultation Biological Opinion

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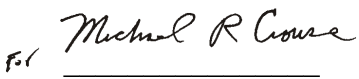
Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation

Sinko Property Wetland Restoration Project,
Coos County, Oregon

Agency: Natural Resources Conservation Service

Consultation
Conducted By: NOAA's National Marine Fisheries Service,
Northwest Region

Date Issued: July 24, 2003

Issued by: 

D. Robert Lohn
Regional Administrator

Refer to: 2002/00890

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1. INTRODUCTION

1.1 Consultation History and Background

On June 26, 2002, the National Resources Conservation Service (NRCS), determined the Sinko Property wetland restoration project was “not likely to adversely affect” (NLAA) Oregon Coast (OC) coho salmon (*Oncorhynchus kisutch*). The NRCS is assisting with project funding, therefore they requested informal consultation under section 7 of the Endangered Species Act (ESA). NOAA’s National Marine Fisheries Service (NOAA Fisheries) reviewed the biological evaluation and cover letter provided by NRCS, reviewed the application with the NRCS, and conducted a site visit with Anne Donnelly of the South Coast Land Conservancy. NOAA Fisheries did not concur with the NLAA determination because coho salmon juveniles will need to be captured (using electrofishing equipment), handled, and transported to a nearby stream. On September 16, 2002, NOAA Fisheries issued a non-concurrence letter. The NRCS reinitiated consultation with a letter dated April 15, 2003, with a determination that this project is “likely to adversely affect” (LAA) OC coho salmon.

In Oregon coastal streams north of Cape Blanco, including the Coquille River, NOAA Fisheries listed OC coho salmon under the ESA as threatened on August 10, 1998 (63 FR 42587). Protective regulations for OC coho salmon were issued by NOAA Fisheries under section 4(d) of the ESA on July 10, 2000 (65 FR 42422). This consultation is undertaken under section 7(a)(2) of the ESA, and its implementing regulations, 50 CFR Part 402. NOAA Fisheries prepared this biological opinion (Opinion) to address effects of the proposed project on this species. The objective of this document is to determine whether the subject action is likely to jeopardize the continued existence of OC coho salmon, and to explain why NOAA Fisheries believes the proposed action will adversely affect essential fish habitat (EFH).

1.2 Proposed Action

The project is on the floodplain of the Coquille River, near the town of Coquille, Oregon. The Coquille River in this area is tidally influenced, and this portion of the floodplain becomes inundated with water during the winter months. The NRCS proposes to fill in 12,000 feet of existing ditches that have been built over the last 100 years to de-water the floodplain for agricultural purposes. A new ditch 3,800 feet long will be excavated along the north perimeter of the property, to alleviate flood concerns of the neighbor to the north. All areas disturbed by construction would be mulched and seeded.

The NRCS proposes to conduct the work during the low flow, in-water work period of July 1 through September 15. Coho salmon could be present in as much as 3,550 feet of ditch, but will be salvaged before any work. Captured fish would be released to Fishtrap Creek. A net will be installed below the project to exclude any fish from moving back into the work area. A ditch plug will be installed on the downstream end of the ditch and all water remaining in the ditch will be pumped out onto the floodplain.

A water control structure will impound water on 80 acres of floodplain at the base of the hills leading away from the valley. Water will exit the pond through a water control structure 0.6 miles from the Coquille River, where it will run through an existing ditch 0.4 miles to Fishtrap Creek. The water control structure is designed to prolong water retention on this part of the floodplain and enhance wetland characteristics. Water will be retained behind the structure through the spring into the summer. The stop boards within the water control structure will be managed to maintain enough flow to fill the V-notch in the top board as long as water is impounded behind it. The pond will be graded such that there is a positive slope behind the water control feature. When the last stop-board is removed from the water control structure, no standing water will be left to entrap fish.

The top board of the water control structure will have a V-notch cut into it approximately 6 inches wide and 5 inches deep. The boards will be managed so as to keep enough water flowing over the structure to fill the V-notch. Visual observations of the water control structure will be made twice a month during the wet season to check for adequate flow and to remove debris. During periods of low water, observations will be made weekly.

Ducks Unlimited will monitor the pond and the water control structure to verify coho salmon migration out of the pond. Sampling with trap nets will occur within the pond in January, April, May, and June. Traps will be set overnight and checked the following day. Fish will be removed, identified, weighed, measured, and released. To monitor fish migration over the water control structure, a fyke net will be set at the outflow of the water control structure. Fish will be handled as above.

2. ENDANGERED SPECIES ACT

2.1 Biological Opinion

2.1.1 Biological Information

Although limited data are available to assess population numbers or trends, NOAA Fisheries believes that all OC coho salmon stocks comprising the OC coho salmon evolutionarily significant unit (ESU) are depressed, relative to past abundance. The OC coho salmon ESU is identified as all naturally-spawned populations of coho salmon in coastal streams south of the Columbia River and north of Cape Blanco (60 FR 38011, July 25, 1995). Biological information for OC coho salmon can be found in species status assessments by NOAA Fisheries (Weitkamp *et al.* 1995) and by ODFW (Nickelson *et al.* 1992).

Abundance of wild OC coho salmon spawners in Oregon coastal streams declined from 1965 to 1975, and has fluctuated at a low level since then (Nickelson *et al.* 1992). Spawning escapements for this ESU may be less than 5% than that of the early 1900s. Contemporary production of OC coho salmon may be less than 10% of historic production (Nickelson *et al.* 1992). Average spawner abundance has been relatively constant since the late 1970s, but pre-

harvest abundance has declined. Average recruits-per-spawner may also be declining. The OC coho salmon ESU, although not at immediate danger of extinction, may become endangered in the future if present trends continue (Weitkamp *et al.* 1995).

OC coho salmon are known to spawn and rear in the Coquille River watershed. Adult coho salmon enter the Coquille River in late September and spawn from October through January, with the majority of spawning activity occurring in smaller, low gradient tributaries. Coho salmon use the Coquille estuary within the project area primarily as a migration corridor. The downstream migration of coho salmon smolts typically occurs from early February through May, but may extend into June.

Oregon Department of Fish and Wildlife (ODFW) personnel sampled several of the drainage ditches in the project area on April 24, 2002 (ODFW data). Juvenile coho salmon, approximately two to three months old, were documented in two of the ditches. According to ODFW (Alan Ritchey, Assistant District Fisheries Biologist, personal communication with Chuck Wheeler), juvenile coho salmon use tributary streams such as Fishtrap Creek, Hall Creek and Gray Creek but do not appear to over-summer in the mainstem Coquille River.

2.1.2 Evaluating Proposed Action

The standards for determining jeopardy are set forth in section 7(a)(2) of the ESA as defined by 50 CFR 402 (the consultation regulations). NOAA Fisheries must determine whether the action is likely to jeopardize the ESA-listed species. This analysis involves the initial steps of defining the biological requirements of the listed species, and evaluating the relevance of the environmental baseline to the species' current status. Subsequently, NOAA Fisheries evaluates whether the action is likely to jeopardize the listed species by determining if the species can be expected to survive with an adequate potential for recovery. In making this determination, NOAA Fisheries must consider the estimated level of mortality attributable to: (1) Collective effects of the proposed or continuing action; (2) the environmental baseline; and (3) any cumulative effects. This evaluation must take into account measures for survival and recovery specific to the listed salmon's life stages that occur beyond the action area. If NOAA Fisheries finds that the action is likely to jeopardize the continued existence of the listed species, NOAA Fisheries must identify reasonable and prudent alternatives for the action.

For the proposed action, NOAA Fisheries' jeopardy analysis considers direct or indirect mortality of fish attributable to the action, and the extent to which the proposed action impairs the function of biologically important features necessary for juvenile and adult migration, spawning, and rearing under the existing environmental baseline.

2.1.3 Biological Requirements

The first step in the methods NOAA Fisheries uses for applying the ESA to listed salmon, is to define the biological requirements of the species most relevant to each consultation. NOAA Fisheries also considers the current status of the listed species, taking into account population

size, trends, distribution and genetic diversity. To assess the current status of the listed species, NOAA Fisheries starts with the determinations made in its decision to list OC coho salmon for ESA protection, and also considers new data available that are relevant to the determination (Weitkamp *et al.* 1995).

The relevant biological requirements are those necessary for OC coho salmon to survive and recover to naturally-reproducing population levels, at which time protection under the ESA would become unnecessary. Adequate population levels must safeguard the genetic diversity of the listed stock, enhance their capacity to adapt to various environmental conditions, and allow them to become self-sustaining in the natural environment. For this consultation, the biological requirements are improved habitat characteristics functioning to support successful rearing and migration. The current status of the OC coho salmon, based upon their risk of extinction, has not significantly improved since the species was listed and, in some cases, their status may have worsened.

2.1.4 Environmental Baseline

Regulations implementing section 7 of the ESA (CFR 402.02) define the environmental baseline as the past and present impacts of all Federal, state, or private actions, and other human activities in the action area. The environmental baseline also includes the anticipated impacts of all proposed Federal projects that have undergone section 7 consultation in the action area, as well as the impacts of state and private actions that are contemporaneous with the consultation in progress.

The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR 402.02). Direct effects occur at the project site, and may extend upstream or downstream based on potentials for disturbance, impairment of fish passage, hydraulics, sediment and pollutant discharge, as well as habitat modifications which could lead to adverse effects to ESA-listed species. Indirect effects may occur throughout the watershed, where actions could lead to additional future activities, or affect the ecological functions which could contribute to adverse effects on listed species. For this consultation, the action area encompasses the 210 acres of the Coquille River floodplain where all the work will occur.

The current baseline conditions are considered “not properly functioning” for most indicators of the Matrix of Pathways and Indicators (NOAA Fisheries 1996) due to diking, ditching, and agricultural impacts throughout the Coquille River floodplain. Dikes in the Coquille River valley have stabilized the river and virtually eliminated the opportunity for the river to meander naturally. Ditches drain the floodplain much quicker than under natural conditions and have transformed much of the floodplain from a wetland to dry site conditions appropriate for agricultural purposes. Other agricultural impacts include water withdrawal and chemical contamination.

2.1.5 Analysis of Effects

2.1.5.1 Effects of Proposed Action

Direct harm of OC coho salmon juveniles may occur due to fish salvage (electrofishing/netting), ditch filling, and project monitoring. Fish removal activities will be in accordance with NOAA Fisheries (1998) fish handling guidelines. Any ESA-listed fish removed from the work area will experience high stress, with the possibility of up to a 5% delayed mortality rate. If any OC coho salmon remain in the floodplain ditches after salvage efforts, they will likely perish when the ditches are filled in. Fish sampled as part of the monitoring protocol will also experience high stress, with the possibility of up to a 5% delayed mortality rate.

The water control structure has the potential to directly take juvenile coho salmon individuals. As water recedes from the floodplain in the spring, juvenile fish seek habitat to rear through the summer. Typically, they end up in the permanent deeper ditches. If fish do not migrate through the water control structure, they may perish if the water quality in the pond becomes limiting as temperature increases and dissolved oxygen decreases. The water control structure may also delay juvenile coho salmon migration out of the pond. During periods of dry weather, there will likely only be a couple of days a week where water flows through the V-notch. It is possible that juvenile coho salmon will avoid going through the V-notch at low flows, delaying them until the next rain or until a stop board is pulled.

Hazardous materials from fuel spills and equipment failure are also a concern. Operation of back-hoes and excavators requires the use of fuel, hydraulic fluid and lubricants, which, if spilled during project construction, could injure or kill aquatic organisms. Petroleum-based contaminants (such as fuel, oil, and some hydraulic fluids) contain polycyclic aromatic hydrocarbons (PAHs) which can cause acute toxicity to salmonids at high levels of exposure, and can also cause chronic lethal as well as acute and chronic sublethal effects to aquatic organisms (Neff 1985).

2.1.5.2 Cumulative Effects

Cumulative effects are defined in 50 CFR 402.02 as “those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation.” Other activities within the watershed have the potential to impact fish and habitat within the action area.

Many actions occur within the Coquille River watershed. Non-federal activities within the action area are expected to increase with a projected 34% increase in human population over the next 25 years in Oregon (Oregon Department of Administrative Services 1999). Thus, NOAA Fisheries assumes that future private and state actions would continue within the action area, but at increasingly higher levels as population density increases. NOAA Fisheries assumes that future Federal projects in the Coquille River watershed will be reviewed through separate section 7 consultation processes and therefore are not considered cumulative effects.

2.1.6 Conclusion

After reviewing the current status of OC coho salmon, the environmental baseline for the action area, the effects of the proposed action and its cumulative effects, NOAA Fisheries has determined that the Sinko Property Wetland Restoration Project, as proposed, is not likely to jeopardize the continued existence of OC coho salmon. This finding is based on incorporation of the following project design criteria into the proposed project design: (1) All work will be performed during the Oregon Department of Fish and Wildlife in-water work window; (2) all work will be isolated from active streamflow; (3) a site re-vegetation plan has been developed and vegetation will be expected to cover and stabilize any bare soil before the onset of fall rains; (4) management of the boards in the water control structure will allow enough water to flow over the structure to keep the V-notch filled; and (5) implementation of NOAA Fisheries fish collection and handling guidelines will minimize the number of OC coho salmon juveniles injured. Therefore, the proposed action is not expected to impair currently properly functioning habitats, appreciably reduce the functioning of already impaired habitats, or prevent or delay long-term progress of impaired habitats toward properly functioning habitat conditions essential to long-term survival and recovery at the population or ESU scale.

2.1.7 Reinitiation of Consultation

This concludes formal consultation on this action in accordance with 50 CFR 402.14(b)(1). Re-initiation of consultation is required: (1) If the amount or extent of incidental take is exceeded; (2) the action is modified in a way that causes an effect on the listed species or their habitats that was not previously considered in the biological assessment and this Opinion; (3) new information or project monitoring reveals effects of the action that may affect the listed species or habitat in a way not previously considered; or (4) a new species is listed or critical habitat is designated that may be affected by the action (50 CFR 402.16).

2.2 Incidental Take Statement

Section 9 and rules promulgated under section 4(d) of the ESA prohibit any taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct) of listed species without a specific permit or exemption. “Harm” is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, and sheltering. “Harass” is defined as actions that create the likelihood of injuring listed species by annoying it to such an extent as to significantly alter normal behavior patterns which include, but are not limited to, breeding, feeding, and sheltering. “Incidental take” is take of listed animal species that results from, but is not the purpose of, the Federal agency or the applicant carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement.

2.2.1 Amount or Extent of Take

NOAA Fisheries anticipates that the action covered by this Opinion is reasonably certain to result in incidental take of juvenile OC coho salmon because of: (1) Capture by trap nets, seines or electrofishing equipment and the subsequent handling and release of fish; (2) blocking or delaying migration out of the pond; and (3) the potential exposure to hazardous materials from use of equipment on the Coquille River floodplain. The effects of these activities on population levels are not expected to be measurable in the long-term, but despite the use of best scientific and commercial data available, NOAA Fisheries cannot quantify a specific amount of incidental take for this action. In instances such as this, NOAA Fisheries designates the expected level of take in terms of the extent of take allowed. For this project, NOAA Fisheries limits the area of allowable take to the 3,550 feet of potentially coho salmon-bearing ditch that will be filled and the 80 acres of land where ponding will occur. Incidental take occurring beyond these areas is not authorized by this consultation.

During the salvage part of this project, it is unlikely that more than 200 juvenile OC coho salmon will be handled. Therefore, lethal take due to this part of the action shall not exceed 10 juvenile OC coho salmon based on an estimated 5% mortality rate. It is also unlikely that more than 200 juvenile OC coho salmon will be handled during the monitoring part of this project. Lethal take due to this part of the action shall not exceed 10 juvenile OC coho salmon as well.

2.2.2 Reasonable and Prudent Measures

NOAA Fisheries believes that the following reasonable and prudent measures are necessary and appropriate to minimize take of the above species. Minimizing the amount and extent of take is essential to avoid jeopardy to the listed species.

1. Minimize the likelihood of incidental take from construction activities in or near watercourses by implementing pollution and erosion control measures.
2. Minimize the likelihood of incidental take associated with in-water work by restricting work to recommended in-water work periods.
3. Minimize the likelihood of incidental take from fish salvage and ditch filling.
4. Minimize the likelihood of incidental take associated with stranding of fish behind the water control structure by managing the flow over the structure and monitor the migration of fish over the structure.
5. Monitor the effectiveness of the proposed conservation measures in minimizing incidental take and report to NOAA Fisheries.

2.2.3 Terms and Conditions

To be exempt from the prohibitions of section 9 of the ESA, the NRCS must ensure compliance with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

1. To implement reasonable and prudent measure #1 (construction activities), the NRCS shall ensure that a pollution and erosion control plan (PECP) is developed for the project to prevent point-source pollution related to construction operations containing all of the pertinent elements listed below and meeting requirements of all applicable laws and regulations.
 - a. Describe methods that will be used to prevent erosion and sedimentation associated with access roads, construction sites, equipment and material storage sites, fueling operations and staging areas. Fuel, maintain and store heavy equipment as follows:
 - i. Place vehicle staging, maintenance, refueling, and fuel storage areas at least 150 feet horizontal distance from any stream.
 - ii. Inspect all vehicles operated within 150 feet of any stream or waterbody daily for fluid leaks before leaving the vehicle staging area. Repair any leaks detected before the vehicle resumes operation.
 - iii. When not in use, store vehicles in the vehicle staging area.
 - b. Describe hazardous products or materials that will be used, including procedures for inventory, storage, handling, and monitoring.
 - c. Develop a spill containment and control plan with these components: Notification procedures; specific clean up and disposal instructions for different products; quick response containment and clean up measures; proposed methods for disposal of spilled materials; and employee training for spill containment.
 - d. Stockpile a supply of erosion control materials (*e.g.*, silt fence and straw bales) on-site to respond to sediment emergencies. Use sterile straw or hay bales when available to prevent introduction of weeds.
 - e. Install all temporary erosion controls (*e.g.*, straw bales, silt fences) downslope of project activities within the riparian area. Keep them in place and maintained throughout the contract period, and until permanent erosion control measures are effective.
2. To implement reasonable and prudent measure #2 (in-water work), the NRCS shall ensure that all in-water work will be completed between July 1 and September 15. Extensions of the in-water work period must be approved in advance by NOAA Fisheries in writing.
3. To implement reasonable and prudent measure #3 (salvage and ditch filling), the NRCS shall ensure that:

- a. Before the ditches are filled, attempts will be made to salvage fish. If the fish salvaging aspect of this project requires the use of seine equipment to capture fish, it must be accomplished as follows:
 - i. Seining will be conducted by or under the supervision of a fishery biologist experienced in such efforts and all staff working with the seining operation must have the necessary knowledge, skills, and abilities to ensure the safe handling of all ESA-listed fish.
 - ii. ESA-listed fish must be handled with extreme care and kept in water to the maximum extent possible during seining and transfer procedures. The transfer of ESA-listed fish must be conducted using a sanctuary net that holds water during transfer, whenever necessary to prevent the added stress of an out-of-water transfer.
 - iii. Seined fish must be released in Fistrap Creek.
 - iv. The transfer of any ESA-listed fish from the applicant to third-parties other than NOAA Fisheries personnel requires written approval from NOAA Fisheries.
 - v. The applicant must obtain any other Federal, state, and local permits and authorizations necessary to conduct seining activities.
 - vi. The applicant must allow the NOAA Fisheries, or its designated representative, to accompany field personnel during the seining activity, and allow such representative to inspect the applicant's seining records and facilities.
 - vii. A description of any seine and release effort will be included in a post-project report, including the name and address of the supervisory fish biologist, methods used to isolate the work area and minimize disturbances to ESA-listed species, stream conditions before and following placement and removal of barriers; the means of fish removal; the number of fish removed by species; the condition of all fish released, and any incidence of observed injury or mortality.
- b. If the fish salvaging aspect of this project requires the use of electrofishing equipment to capture fish, it must be accomplished as follows (NOAA Fisheries 1998):
 - i. Electrofishing may not occur in the vicinity of listed adults in spawning condition or in the vicinity of redds containing eggs.
 - ii. Equipment must be in good working condition. Operators must go through the manufacturer's preseason checks, adhere to all provisions, and record major maintenance work in a log.
 - iii. A crew leader having at least 100 hours of electrofishing experience in the field using similar equipment must train the crew. The crew leader's experience must be documented and available for confirmation; such documentation may be in the form of a logbook. The training must occur before an inexperienced crew begins any electrofishing; it must also be conducted in waters that do not contain listed fish.
 - iv. Measure conductivity and set voltage as follows:

| <u>Conductivity (umhos/cm)</u> | <u>Voltage</u> |
|--------------------------------|----------------|
| Less than 100 | 900 to 1100 |
| 100 to 300 | 500 to 800 |
| Greater than 300 | 150 to 400 |

- v. Direct current (DC) must be used at all times.
 - vi. Each session must begin with pulse width and rate set to the minimum needed to capture fish. These settings should be gradually increased only to the point where fish are immobilized and captured. Start with pulse width of 500us and do not exceed 5 milliseconds. Pulse rate should start at 30Hz and work carefully upwards. *In general*, pulse rate should not exceed 40 Hz, to avoid unnecessary injury to the fish.
 - vii. The zone of potential fish injury is 0.5 m from the anode. Care should be taken in shallow waters, undercut banks, or where fish can be concentrated because in such areas the fish are more likely to come into close contact with the anode.
 - viii. The monitoring area must be worked systematically, moving the anode continuously in a herringbone pattern through the water. Do not electrofish one area for an extended period.
 - ix. Crew must carefully observe the condition of the sampled fish. Dark bands on the body and longer recovery times are signs of injury or handling stress. When such signs are noted, the settings for the electrofishing unit may need adjusting. Sampling must be terminated if injuries occur or abnormally long recovery times persist.
 - x. The electrofishing settings must be recorded in a logbook along with conductivity, temperature, and other variables affecting efficiency. These notes, together with observations on fish condition, will improve technique and form the basis for training new operators.
4. To implement reasonable and prudent measure #4 (water control structure), the NRCS shall ensure that:
- a. The ground behind the water control structure will be graded in such a manner as to have a positive grade towards the water control structure.
 - b. The stop-boards will be managed to keep enough water flowing over the structure to fill the V-notch. Visual observations of the water control structure will be made twice a month during the wet season to check for adequate flow and to remove debris. During periods of low water, observations will be made weekly.
 - c. Trap nets will be used to monitor the pond and water control structure to verify coho salmon migration out of the pond.
 - i. Trapping will be conducted by or under the supervision of a fishery biologist experienced in such efforts and all staff working with the trapping operation must have the necessary knowledge, skills, and abilities to ensure the safe handling of all ESA-listed fish.

- ii. ESA-listed fish must be handled with extreme care and kept in water to the maximum extent possible during trapping and handling procedures. The transfer of ESA-listed fish must be conducted using a sanctuary net that holds water during transfer, whenever necessary to prevent the added stress of an out-of-water transfer.
 - iii. The transfer of any ESA-listed fish from the applicant to third-parties other than NOAA Fisheries personnel requires written approval from NOAA Fisheries.
 - iv. The applicant must obtain any other Federal, state, and local permits and authorizations necessary to conduct trapping activities.
 - v. The applicant must allow the NOAA Fisheries, or its designated representative, to accompany field personnel during the trapping activity, and allow such representative to inspect the applicant's trapping records and facilities.
 - vi. A description of any trapping effort will be included in a post-project report, including the name and address of the supervisory fish biologist, the means of fish removal; the number of fish removed by species; the condition of all fish released, and any incidence of observed injury or mortality.
- 5. To implement reasonable and prudent measure #5 (monitoring), the NRCS shall ensure that:
 - a. Comprehensive monitoring will occur and a post project report prepared to ensure that these terms and conditions meet their objective of minimizing the likelihood of adverse effects to OC coho salmon and their habitat.
 - i. Submit a report to NOAA Fisheries within 120 days of completing the project. Describe the NRCS's success meeting conservation recommendations above. Include the following information:
 - a. Project identification.
 - 1. Project name.
 - 2. Starting and ending dates of work completed for this project.
 - 3. The NRCS's contact person.
 - b. A summary of all pollution and erosion control inspection reports, including descriptions of any failures experienced with erosion control measures, efforts made to correct them and a description of any accidental spills of hazardous materials.
 - c. Documentation of the following:
 - 1. Planting composition and density.
 - 2. A plan to inspect and, if necessary, replace failed plantings as required in 1(a).
 - d. A narrative assessment of the effects of the project and compensatory mitigation on natural stream function.

- e. Photographic documentation of environmental conditions at the project site before, during and after project completion.
 - f. Photographs will include general project location views and close-ups showing details of the project area and project, including pre and post construction.
 - g. Each photograph will be labeled with the date, time, photo point, project name, the name of the photographer, and a comment describing the photograph's subject.
 - h. Relevant habitat conditions include characteristics of channels, streambanks, riparian vegetation, flows, water quality, and other visually discernable environmental conditions at the project area, and upstream and downstream of the project.
- b. Submit monitoring reports to:
NOAA Fisheries
Oregon Habitat Branch, Habitat Conservation Division
Attn: 2002/00890
525 NE Oregon Street, Suite 500
Portland, Oregon 97232-2778
- c. If a dead, injured, or sick endangered or threatened species specimen is found, initial notification must be made to the NOAA Fisheries Service Office for Law Enforcement, Roseburg Field Office, 2900 NW Stewart Parkway, Roseburg, Oregon 97470, at 541.957.3388. Care should be taken in handling sick or injured specimens to ensure effective treatment and care or the handling of dead specimens to preserve biological material in the best possible state for later analysis of cause of death. In conjunction with the care of sick or injured endangered and threatened species or preservation of biological materials from a dead animal, the finder has the responsibility to carry out instructions provided by Law Enforcement to ensure that evidence intrinsic to the specimen is not disturbed.

3. MAGNUSON-STEVENSON ACT

3.1 Background

The MSA, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-297), requires the inclusion of essential fish habitat (EFH) descriptions in Federal fishery management plans. In addition, the MSA requires Federal agencies to consult with NOAA Fisheries on activities that may adversely affect EFH.

EFH means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (MSA §3). For the purpose of interpreting the definition of essential fish habitat: "Waters" include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where

appropriate; “substrate” includes sediment, hard bottom, structures underlying the waters, and associated biological communities; “necessary” means the habitat required to support a sustainable fishery and the managed species’ contribution to a healthy ecosystem; and “spawning, breeding, feeding, or growth to maturity” covers a species’ full life cycle (50 CFR 600.110).

Section 305(b) of the MSA (16 U.S.C. 1855(b)) requires that:

- Federal agencies must consult with NOAA Fisheries on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH;
- NOAA Fisheries shall provide conservation recommendations for any Federal or state activity that may adversely affect EFH;
- Federal agencies shall, within 30 days after receiving conservation recommendations from NOAA Fisheries, provide a detailed response in writing to NOAA Fisheries regarding the conservation recommendations. The response shall include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on EFH. In the case of a response that is inconsistent with the conservation recommendations of NOAA Fisheries, the federal agency shall explain its reasons for not following the recommendations.

The MSA requires consultation for all actions that may adversely affect EFH, and does not distinguish between actions within EFH and actions outside EFH. Any reasonable attempt to encourage the conservation of EFH must take into account actions that occur outside EFH, such as upstream and upslope activities, that may have an adverse effect on EFH.

Therefore, EFH consultation with NOAA Fisheries is required by federal agencies undertaking, permitting or funding activities that may adversely affect EFH, regardless of its location.

3.2 Identification of EFH

Pursuant to the MSA the Pacific Fisheries Management Council (PFMC) has designated EFH for Federally-managed fisheries within the waters of Washington, Oregon, and California. Designated EFH for groundfish and coastal pelagic species encompasses all waters from the mean high water line, and upriver extent of saltwater intrusion in river mouths, along the coasts of Washington, Oregon and California, seaward to the boundary of the U.S. exclusive economic zone (370.4 km) (PFMC 1998a, 1998b). Freshwater EFH for Pacific salmon includes all those streams, lakes, ponds, wetlands, and other water bodies currently, or historically accessible to salmon in Washington, Oregon, Idaho, and California, except areas upstream of certain impassable man-made barriers (as identified by the PFMC 1999), and longstanding, naturally-impassable barriers (*i.e.*, natural waterfalls in existence for several hundred years) (PFMC 1999). In estuarine and marine areas, designated salmon EFH extends from the nearshore and tidal submerged environments within state territorial waters out to the full extent of the exclusive

economic zone (370.4 km) offshore of Washington, Oregon, and California north of Point Conception to the Canadian border (PFMC 1999).

Detailed descriptions and identifications of EFH are contained in the fishery management plans for groundfish (PFMC 1998a), coastal pelagic species (PFMC 1998b), and Pacific salmon (PFMC 1999). Casillas *et al.* (1998) provides additional detail on the groundfish EFH habitat complexes. Assessment of the potential adverse effects to these species' EFH from the proposed action is based, in part, on these descriptions and on information provided by the NRCS.

3.3 Proposed Actions

The proposed actions are detailed above in section 1.2 of this Opinion. The action area includes the affected floodplain and drainage ditches. The action area includes habitats that have been designated as EFH for various life-history stages of coho salmon and chinook salmon.

3.4 Effects of Proposed Action

As described in detail in section 2.1.5 of this Opinion, the proposed action may result in short-term adverse effects to habitat parameters. These adverse effects are:

1. Loss of habitat. Juvenile coho salmon exist in as much as 3550 feet of the ditch that will be filled in. It is expected that juvenile chinook salmon may use this habitat as well. The effects of this lost habitat are expected to be short term since new habitat will be created in two other areas. A new ditch 3800 feet long will be built on the north perimeter of the subject property and will likely become coho salmon habitat. Also, the new 80 acre pond is expected to sustain coho salmon during the winter, spring, and early summer months.
2. Chemical Contamination. As with all construction activities, accidental release of fuel, oil, and other contaminants may occur during the construction phase, adversely affecting water quality, both at the site and at points downstream. An increase in contaminant levels can adversely affect any fish and filter-feeding macro-invertebrates that may provide food to fish at the work site.

3.5 Conclusion

NOAA Fisheries concludes that the proposed action will adversely affect EFH for coho salmon and chinook salmon.

3.6 EFH Conservation Recommendations

Pursuant to section 305(b)(4)(A) of the MSA, NOAA Fisheries is required to provide EFH conservation recommendations to Federal agencies regarding actions which may adversely affect EFH. While NOAA Fisheries understands that the conservation measures described in the biological assessment will be implemented by the NRCS, it does not believe that these measures

are sufficient to address the adverse impacts to EFH described above. However, the terms and conditions outlined in section 2.2.3 are applicable to EFH for coho salmon and chinook salmon, and address adverse effects. Consequently, NOAA Fisheries incorporates them here as EFH conservation recommendations.

3.7 Statutory Response Requirement

Pursuant to the MSA (§305(b)(4)(B)) and 50 CFR 600.920(j), Federal agencies are required to provide a detailed written response to NOAA Fisheries' EFH conservation recommendations within 30 days of receipt of these recommendations. The response must include a description of measures proposed to avoid, mitigate, or offset the adverse impacts of the activity on EFH. In the case of a response that is inconsistent with the EFH conservation recommendations, the response must explain the reasons for not following the recommendations, including the scientific justification for any disagreements over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate, or offset such effects.

3.8 Supplemental Consultation

The NRCS must reinitiate EFH consultation with NOAA Fisheries if the proposed action is substantially revised in a manner that may adversely affect EFH, or if new information becomes available that affects the basis for NOAA Fisheries' EFH conservation recommendations (50 CFR 600.920(k)).

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